

IN THE CLAIMS:

1. (Previously presented) A medical electrical lead, comprising:  
a component including a surface and a groove formed in the surface;  
a conductor extending within the lead and including a portion positioned within the groove of the component; and  
a resistance weld formed between the portion of the conductor and the component;  
wherein the groove includes a depth and the portion of the conductor positioned within the groove includes a pre-weld diameter, the pre-weld diameter being greater than the depth of the groove.
2. (Original) The medical electrical lead of claim 1, wherein the surface has a curved profile.
3. (Previously presented) The medical electrical lead of claim 2, wherein the component comprises a substantially tubular body and wherein the surface is an inner surface of the substantially tubular body.
4. (Original) The medical electrical lead of claim 2, wherein the surface of the component forms an outer diameter.
5. (Original) The medical electrical lead of claim 2, wherein the surface of the component forms an inner diameter and the component further includes an outer electrode surface.
6. (Original) The medical electrical lead of claim 5, wherein the outer electrode surface includes a titanium nitride coating.
7. (Original) The medical electrical lead of claim 1, wherein the conductor is a cable.

8. (Original) The medical electrical lead of claim 1, wherein the conductor is a coil.
9. (Original) The medical electrical lead of claim 1, wherein the groove extends approximately aligned with a longitudinal axis of the component.
10. (Original) The medical electrical lead of claim 1, wherein the groove extends approximately transverse to a longitudinal axis of the component.
11. (Previously presented) The medical electrical lead of claim 2, wherein the groove spiraling about a portion of a circumference of the surface.
12. (Original) The medical electrical lead of claim 1, wherein the groove includes an approximately semi-circular cross-section.
13. (Original) The medical electrical lead of claim 1, wherein the groove includes an approximately v-shaped cross-section.
14. Cancelled.
15. (Withdrawn) A method for forming a resistance weld between a conductor and a component of a medical electrical lead, the method comprising steps of:  
placing a portion of the conductor within a groove formed in a surface of the component;  
pressing a welding electrode against the portion of the conductor; and  
applying a welding pulse while continuing to press the electrode, the electrode being  
stopped from flattening the cable by contact with the surface of the  
component on either side of the groove.
16. (Withdrawn) The method of claim 15, wherein the surface of the component forms an inner diameter and the welding electrode is inserted within the inner diameter.

17. (Withdrawn) The method of claim 16, wherein the surface of the component forms an outer diameter.
18. (Withdrawn) The method of claim 15, wherein the conductor is a cable.
19. (Withdrawn) The method of claim 15, wherein the conductor is a coil.
20. (Original) The method of claim 15, further comprising a step of applying a pre-weld pulse to condition the component and wherein the surface of the component forms an inner diameter and an outer surface of the component forms an electrode including a titanium nitride coating.
21. (Withdrawn) The method of claim 15, wherein the welding pulse peaks at a current between approximately 600 amps and approximately 700 amps
22. (Withdrawn) The method of claim 20, wherein the pre-weld pulse peaks at approximately 400 amps.
23. (Withdrawn) The method of claim 15, wherein a force applied in pressing the welding electrode against the portion of the conductor is greater than approximately 5 pounds.
24. (Withdrawn) The method of claim 23, wherein the force is between approximately 6 pounds and approximately 10 pounds.
25. (Previously presented) The medical electrical lead of claim 1, wherein the component comprises an elongated body, and wherein the groove comprises a longitudinal slot substantially parallel with the longitudinal axis of the elongated body.

Please ADD the following NEW claims:

26. (New) An electrical medical lead, comprising:

a lead body;  
a transition sleeve;  
a connector leg coupled to the lead body via the transition sleeve;  
an electrical conductor extending from the connector leg into the lead body;  
a transition component within the transition sleeve, the transition component comprising an outer surface and a groove formed in the outer surface;  
the conductor extending through the groove; and  
a resistance weld formed between the conductor and the component along the groove.

27. (New) An electrical medical lead, comprising:  
a lead body;  
an electrical conductor extending through the lead body;  
an electrode ring comprising an inner surface and a groove formed in the inner surface;  
the electrical conductor extending through the groove; and  
a resistance weld formed between the conductor and the electrode ring along the groove.

28. (New) The electrical medical lead of claim 27, further comprising:  
an electrode ring at a distal end of the lead body, the electrode ring comprising an inner surface and a second groove formed in the inner surface;  
the conductor extending through the second groove; and  
a second resistance weld formed between the conductor and the electrode ring along the second groove.